

Date: Thursday, 5/10/2007 2:35:55 PM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : CROSSTUBE EXTRUSION (206L)
Job Number : 32305	
Estimate Number : 10027	
P.O. Number : <i>N/A</i>	Part Number : D6004115
This Issue : 5/10/2007 S.O. No. : <i>N/A</i>	Drawing Number : D6004 REV A
Prsht Rev. : NC	Project Number : N/A
First Issue : <i>MA</i> Type : RMA	Drawing Revision : A
Previous Run : 29114	Material : <i>N/A</i>
Written By : <i>[Signature]</i>	Due Date : 10/30/2007
Checked & Approved By : <i>[Signature]</i>	Qty: <i>18</i> Um: <i>20</i> Each
Comment : Est Rev.B 00.12.15 Added: Issue P/O EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	PG	PURCHASING
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Comment: PURCHASING

Issue P/O *3761**C207/05/11* *(3761) 18*

- a) Extrude as per Dwg D6004
- b) Material: 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11) seamless aluminum tube
- c) Minimum ultimate tensile strength = 77 ksi
- d) Minimum tensile yield strenght=66 ksi
- e) Material certification required

2.0	D6004115P	Crosstube material
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 15.0000 Each(s)

Crosstube material

3.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage
 Ensure material certification is attached

C207/28 *(20)*

4.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

Ensure Material certification comply to Dwg D6004

IL/5 *A609/28*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: *R* Date: 01/12/06

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: CROSSTUBE EXTRUSION (206L)

Job Number: 32305

Part Number: D6004115

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



U/A



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

6.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

C 207/12/06

(20)

7.0

QC21

FINAL INSPECTION/W/O RELEASE



(22)

Comment: FINAL INSPECTION/W/O RELEASE

D 07/12/06

Job Completion



U A. 12/07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

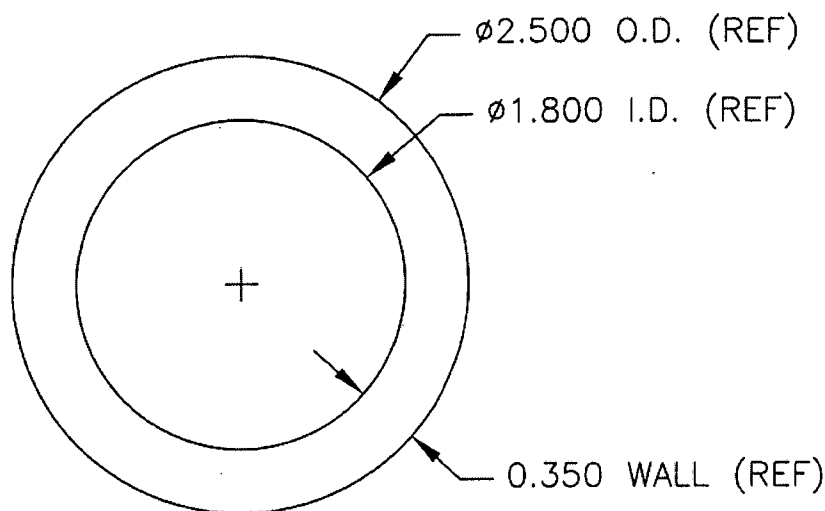
NOTE: Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D6004	REV. A SHEET 1 OF 1
DATE 00.11.22		TITLE CROSSTUBE MATERIAL	SCALE 1:1
A	00.11.22	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED
00.11.24 *#*



NOTES

- 1) D6004-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 115" LONG TUBE: D6004-115

- 2) MATERIAL: 2.500 OD x 0.350 WALL 7075-T6/T6511 (WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11) SEAMLESS ALUMINUM TUBE.
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi
- 3) TOLERANCES ARE PER ASTM B210 AS FOLLOWS:
O.D.: ± 0.006 MEAN (± 0.012 INCLUDING OVALITY)
WALL: ± 0.015 MEAN (± 0.035 INCLUDING ECCENTRICITY)
LENGTH: XXX $+0.125/-0.000$
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH
- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

SHOE COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 32305

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ALUnna

order confirmation

25006

page: 4
date: 8.29.2007
customer: 40980

inner diameter: 2,250 INCH
wall thickness: 0,625 INCH Tol. +0,063 -0,063
fixed length 129,000 INCH Tol. +0,188

test report acc. to EN 10204/3.1 / RM 531 / Rp0,2: 455
straightness 0,01 INCH / 1 FEET / RMS outer 25
tol. on quantity +10 % -10 %
3.500" OD 0.625" Wall, 129" lengths
Part Number D6009-129 crosstube
Surface Finish max. RMS 25
Tolerances per ASTM B210 and your drawing D6009-XXX
Tubes protected with corrosion protective oil
Tubes line marked
Packing list, Inspection certificate
Packing: seaworthy wooden cases

item	quantity	unit	price USD	unit value USD	delivery
006	18,000	PC	308,72	5.556,96	November 09, 2007

despatch date change

AWU article: 19796 / Tariff no. 76082081
Customer article: D6004-115 2.500 X 0.350 X 115
product: TUBES / seamless extruded / EN AW-7075 / round
condition: T 6511 / AMS-QQ-A-200/11

outer diameter: 2,500 INCH Tol. +0,012 -0,012
tol. for mean OD +0,006 -0,006
inner diameter: 1,800 INCH
wall thickness: 0,350 INCH Tol. +0,035 -0,035
fixed length 115,000 INCH Tol. +0,125

inspection cert. acc. to EN10204/3.1 / RM 531 / Rp0,2: 455
straightness 0,01 INCH / 1 FEET / RMS outer 25
tol. on quantity +15 % -15 %
2.500" OD 0.350" Wall, 115" lengths
Part Number D6004-115 crosstube
Surface Finish max. RMS 25
Tolerances per ASTM B210 / your drawing D6004
Tubes protected with corrosion protective oil
Tubes line marked
Packing: seaworthy wooden cases
terms of delivery: DDP (Delivered, Duty, Paid)
Terms of payment: 30 days after date of delivery

Er 3.1
07/02/28



ALUnna

Abnahmeprüfzeugnis 3.1 - EN 10204:2004**Inspection Certificate 3.1 - EN 10204:2004 / Certificat de Reception 3.1- EN 10204:2004****Kunde:** Dart Aerospace Ltd.
Client:1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada**Zeugnisnummer:** 1012/07**Cert No. / No. du certificat:****Bestellnummer:** PO00003761**Order No. / No. de commande****Produkt:** Rohre nahtlos gepresst**Product / Produit:** Tubes seamless extruded Tubes file sur aiguille**Auftrag:** 25006/6**Reference/Notre Reference:****Spezifikation:** AMS - QQ - A - 200/11E; Spezifikation Dart Aerospace
Specification: D6004**Werkstoff:** EN AW-7075**Alloy/Alliage:** 3.4365**Zustand:** T 6511**Temper/Etat****Abmessung** 2,500 INCH x 1,800 INCH x 0,350 INCH x 115,000 INCH**Size / Dimension** D6004-115 2.500 X 0.350 X 115**Kennzeichnung** ALUnna - Cert No. 1012/07 - 7075 - T 6511 - Cast No. 8086-1 - AMS - QQA 200/11 - 2.500" OD X 0.350" Wall -
Marking/Marquage: Heat No. 947/09 - Lot 25006/6-1 PO. 00003761**Lieferung:** Stück/pcs. kg/kgs
Delivered Material / Matériel délivre: 20 249,00**1. Chemische Analyse Chemical Analysis / analyse chimique**

		Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Ni
Charge/ Cast No.	min.			1,2		2,1	0,18	5,1						
	max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
80861		0,05	0,13	1,48	0,07	2,33	0,19	5,76	0,04	0,01	0,01	0,01	0,01	0,01

Elemente ohne Angabe < 0,01 % / Elements without indication < 0,01 %

2. Mechanische Eigenschaften Mechanical Properties / Valeurs Mécaniques

Anforderungen Specification	Rm N/mm ²	Rp0,2 N/mm ²	A5 %	A 50 %	HB	Heat No.
min:	531	455				
max:						
1	591	543	10,0	8,0		947/09 - 20 pcs.

RMS: outside 25 - max. 16,1 µ"

**Ergebnis der
Prüfungen:**Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der
Bestellannahme entspricht**Test results:**

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats:

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

Zertifiziert nach DIN EN ISO 9001:2000, gültig bis 2009-03-27
Zertifikat-Beinhalter: Nr. 001059 OM